Supplementary Information:

Effectively synthesis of dimethylhexane-1,6-dicarbamate from 1,6-hexanediamine and dimethyl carbonate using 3-Amino-1,2,4-triazole potassium as a solid base catalyst at ambient temperature

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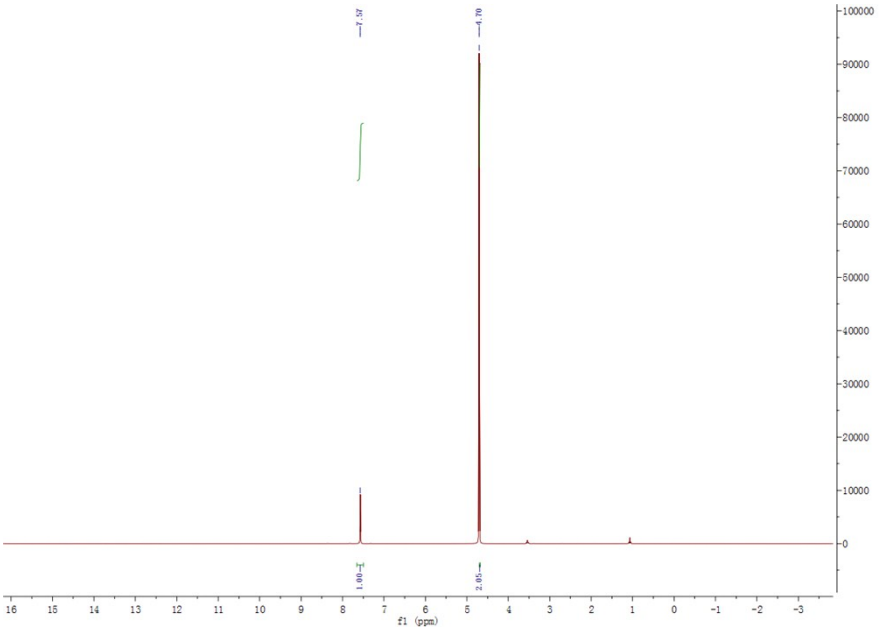

Fig. S1 ^{1}H NMR spectra of 1,2,4-Triazole potassium salt.

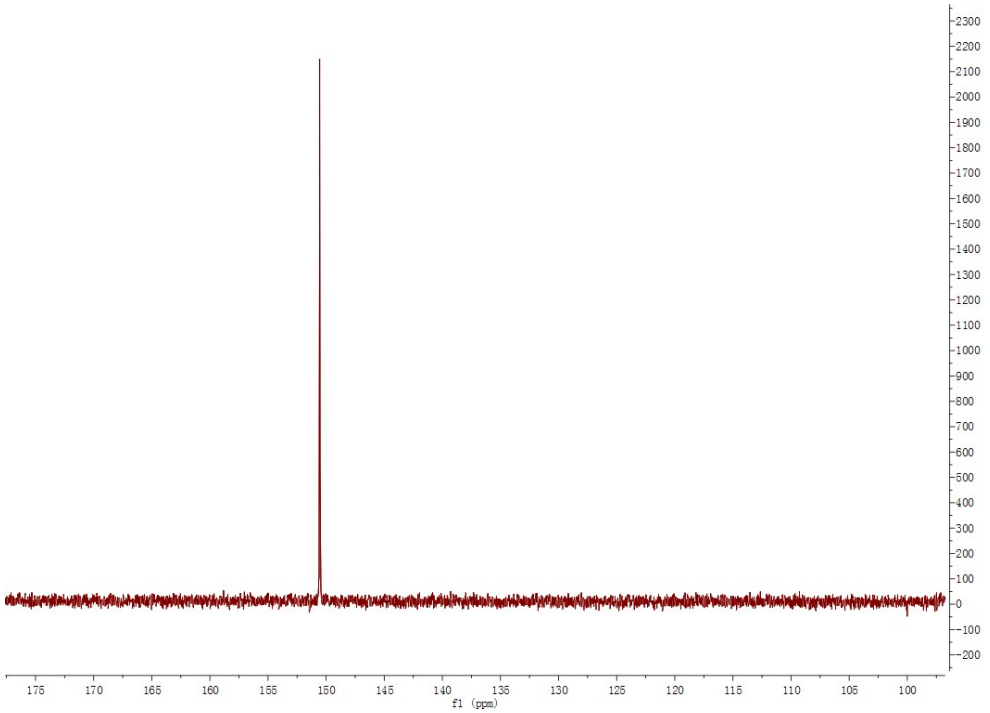

Fig. S2 ^{13}C NMR spectra of 1,2,4-Triazole potassium salt.

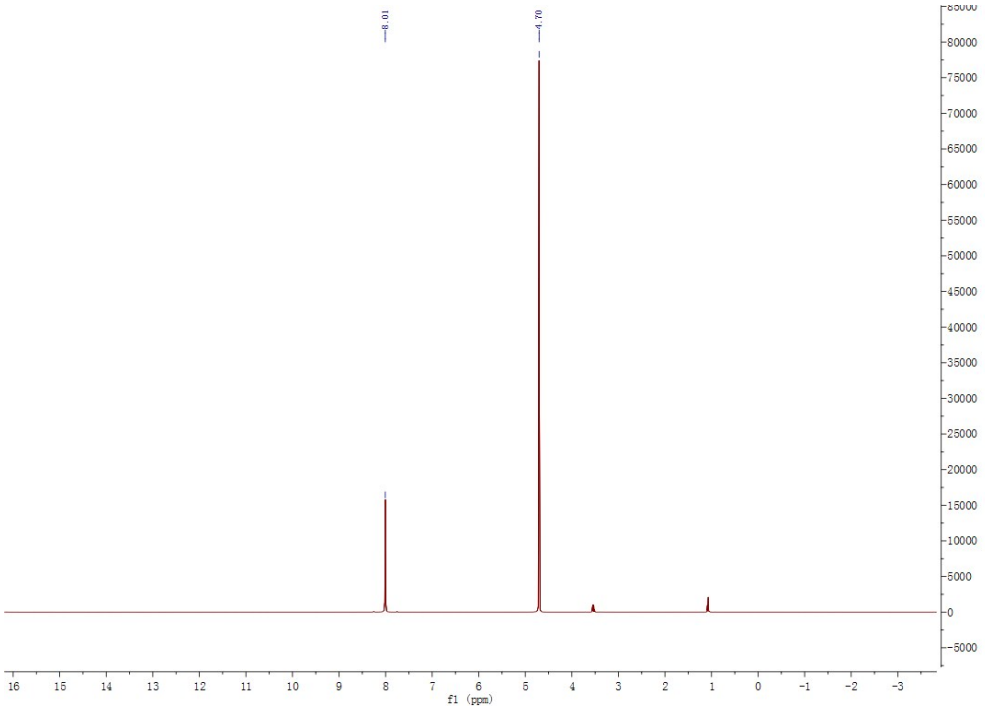

Fig. S3 ^{1}H NMR spectra of 3- amino-1,2,4-Triazole potassium salt.

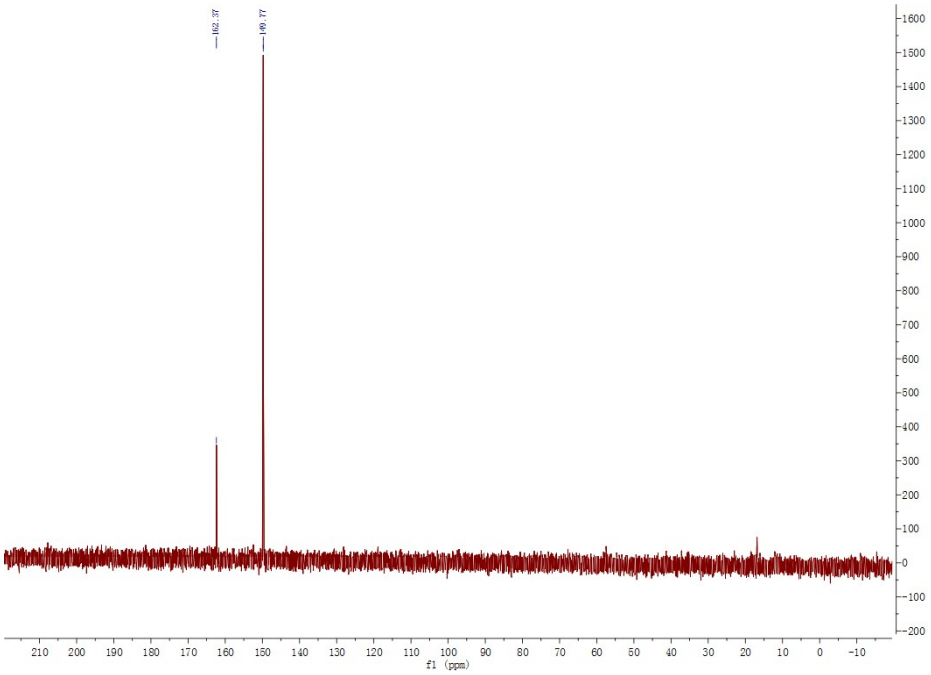

Fig. S4 ^{13}C NMR spectra of 3- amino-1,2,4 Triazole potassium salt.

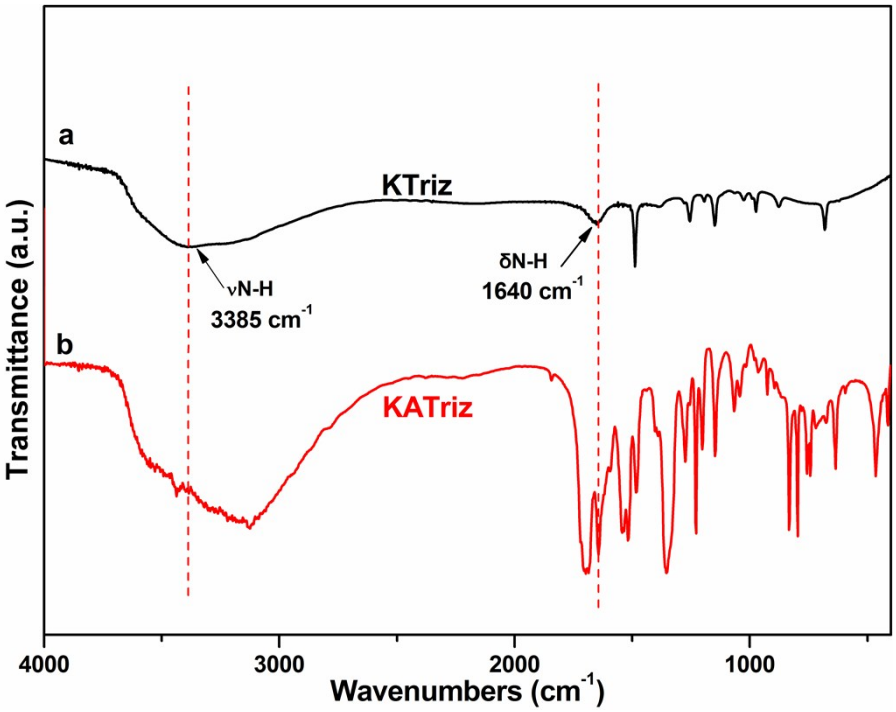

Fig. S5 IR of the solid salts.

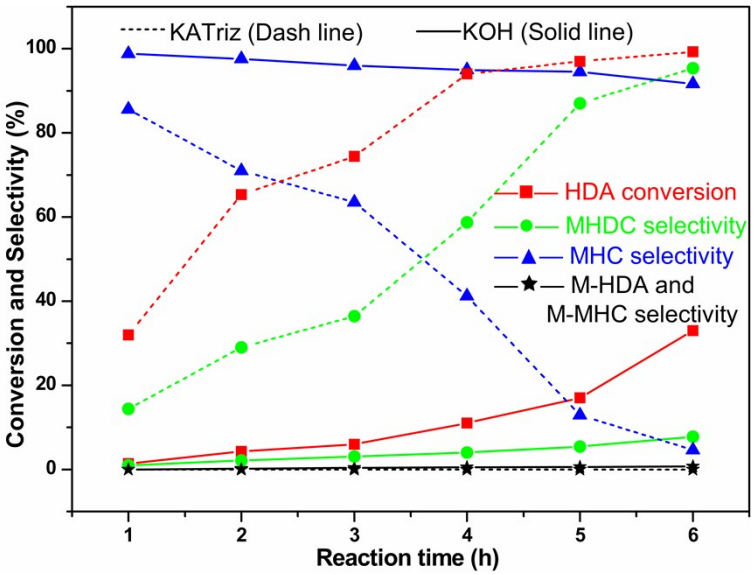

Fig. S6 Time conversion plot for the reaction of HDA with DMC in the presence of KOH (or KATriz) Catalysts. Reaction conditions: 30 mmol HDA; 90 mmol DMC; 5wt% KATriz or KOH (based on the mass of charged HDA); 30 °C, 6 h.

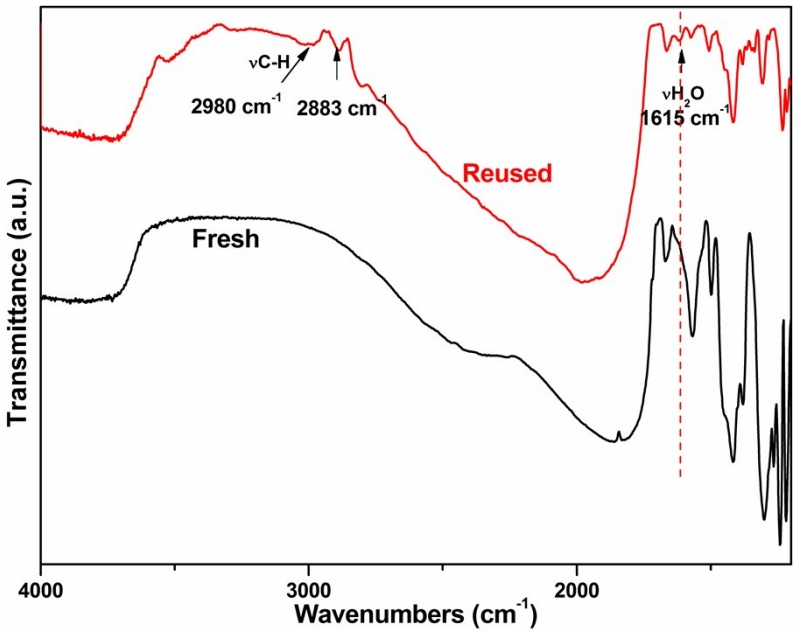

Fig. S7 IR of the KATriz salts before and after use.

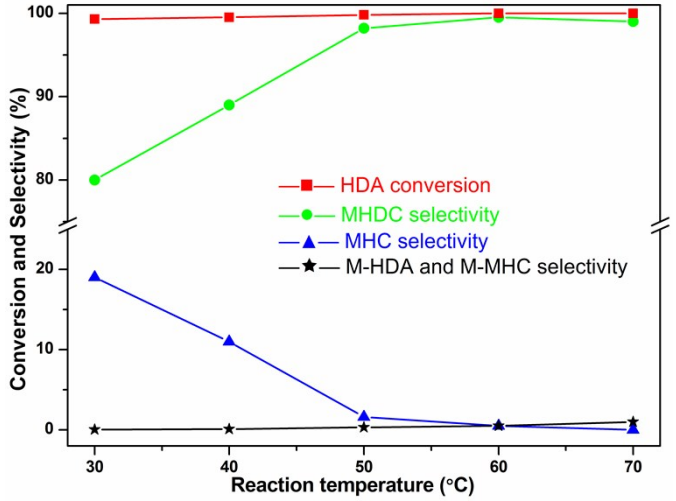

Fig. S8 Effect of reaction temperature on MHDC synthesis. Reaction conditions: 30 mmol HDA; 90 mmol DMC; 5wt% KATriz (based on the mass of charged HDA); 5 h.

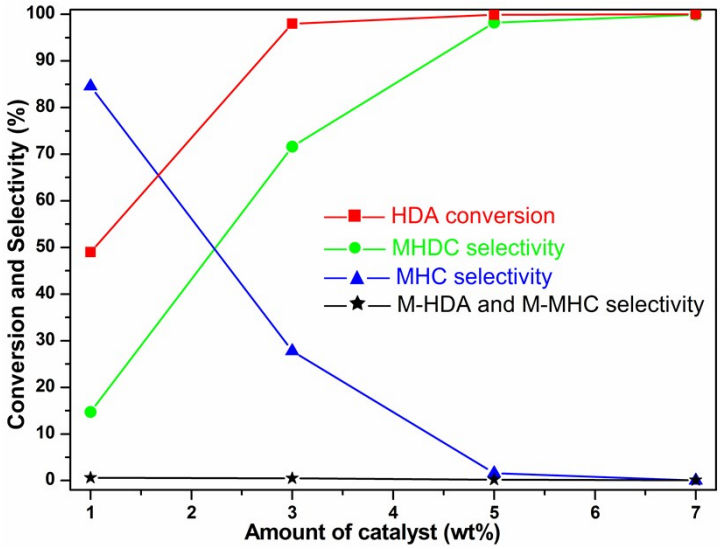

Fig. S9 Effect of catalyst concentration on MHDC synthesis. Reaction conditions: 30 mmol HDA; 90 mmol DMC; 50 °C; 5 h.

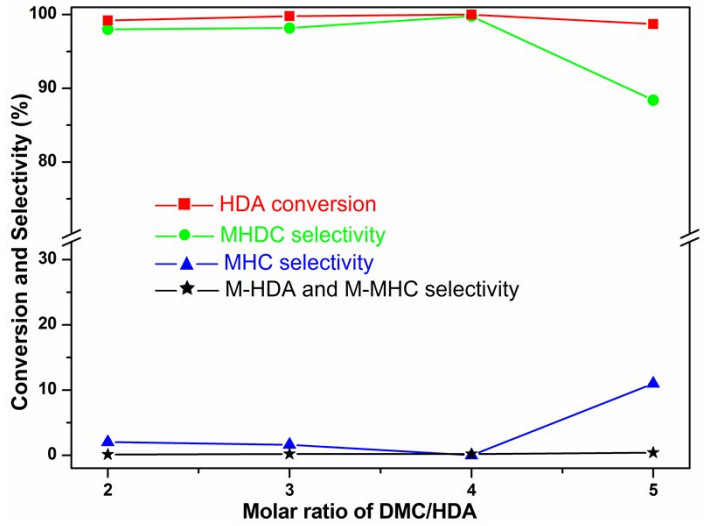

Fig. S10 Effect of molar ratio of DMC to HDA on MHDC synthesis. Reaction conditions: 5wt% KATriz (based on the mass of charged HDA); 50 °C; 5 h.